Paper Trade Journal–Volume 154–Year 1970
Index to Feature Articles

The articles listed below are cross-referenced for the convenience of users. Short items and news stories are not included in this index.

	PAGE	ISSUE
Board Manufacture		
A new approach to press section performance analysis —David P. Antos and Donald E. Baade	36	July 27
A new functional language for the specifying of wet felts —Charles G. Tewksbury	68	Jan. 26
Benefits obtained by chemical treatment of paper machine wires —D. Caulkins, F. T. Corradini, C. G. Gendron, C. G. Hollis, and A. K. Wells	51	April 27
Coordinated control of basis weight and speed changes —R. L. Moore	44	Sept. 7
Cross machine moisture uniformity—its importance and control	67	March 30
Defects cause in drying paper—notably cockling and curl	36	April 20
Design, use and limitations of high velocity air hoods —K. H. Anderson	36	August 17
Don't overlook the chemical reactions in paper drying —D. Eklund	36	Nov. 23
Drainage and formation on the fourdrinier are still misunderstood —Foster P. Doane, Jr.	32	Dec. 28
Dryer hoods and ventilation—how they affect costs and paper quality —Hugh Marshall	48	Oct. 26
Dryer section condensate removal and steam pressure control Torsten Simmons	32	Aug. 3
Effect of heat flow through dryer walls on drying capacity —Paper Trade Journal Staff Report	39	Dec. 21
Factors which affect MD drying on the paper machine	54	March 16
Factors which affect steam consumption in paper drying —Gary Smook	56	April 27
Foil systems and the future of single wire paper machines —V. E. Hansen	80	Feb. 16
Heat recovery in paper drying—practical and economic considerations —Gary A. Smook	50	June 1
Heater and mass transfer from cylinder to paper and within the paper during drying —W. A. Spraker	28	Jan. 5
How condensate flow affects heat transfer in paper machine dryers —Gunnar Gavelin	97	Aug. 24
How forming variables can modify sheet strength —D. J. Fahey and C. W. Polley	40	July 13
How paperboard is doing and meaning of capacity survey —J. Rodney Edwards	28	Dec. 21
How to reach press section decisions on an economic basis —Peter Nillson	45	July 13
Is your paper machine keeping up with clothing styles?	44	Oct. 5
Continuous oxygen bleaching in commercial production —Gordon Rowlandson	38	Dec. 21
Modern chemicals bring new horizons to papermaking —Paul D. Van Derveer	45	Feb. 9
National Gypsum builds a new cylinder machine mill —Maurice R. Castagne	30	Sept. 28
New Cylinder formers prove successful at Beveridge plant	46	Dec. 14
New design for system for air removal from stock —Gunnar Gavelin	38	Aug. 31
New heat recovery system for paper machine hood exhaust —Gunnar Gavelin	38	Feb. 23
New refiners bring economies in 9 pt. production at Groveton	58	April 13
Packaging Corp. proves new cylinder former design —Charles Jakeway	26	March 2
Paperboard producers ponder production and profits —John C. W. Evans	27	Dec. 21
Paper drying developments with plastic screen dryer fabrics —Edward F. DeCrosta	52	May 11
Paper machine and related noise abatement developments —J. W. Crouse and C. B. Dahl	44	Nov. 30
Price gets a clean, accurate cut with a duplex board sheeter —Maurice R. Castagne	50	May 4
Problems of the paperboard section of our industry —C. R. Duffie	30	Dec. 21
Radically new press felt design for vertical flow presses —William S. Wightman	40	July 6
Results from a new moisture profile-correcting dryer fabric	44	May 25
What are the current trends in drying of paperboard? —Hugh G. Marshall	41	Oct. 5
What is the current status of progress in forming fabric use	62	May 18
What is the outlook for drying paper with micro-waves? —B. Agdur and P. Hedvall	38	Sept. 28
Use of survey methods in the study of paper drying systems—Part I —Gary A. Smook	58	Nov. 9
Use of survey methods in the study of paper drying systems—Part II —Gary A. Smook	61	Nov. 16

XUM

	PAGE	ISSUE
Chemical pulping and bleaching		
A different approach to oxidation of black liquor —Herbert L. Freedman	50	June 8
Continuous oxygen bleaching in commercial production —Gordon Rowlandson	38	Dec. 21
Design and operation of ACE system for kraft odor reduction —J. V. Gommi	44	July 6
Direct oxidation of sodium sulphide to sodium sulphite —T. T. Collins and P. E. Shick	50	Oct. 5
Fluidized bed burning of kraft mill lime mud —A. Erdman, Jr.	40	Sept. 7
Pulp bleaching technology moves toward better, faster methods	38	June 8
Spent liquor disposal via FluoSolids combustion at an NSSC mill —H. Miles	26	Aug. 17
TAPPI Pulping Conference highlights non-wood plant fibers	50	Dec. 14
Coating		
Brakes and continuous systems for converting unwind stands —George L. Booth	40	April 20
"Bubble coating-sleeping giant? Could this revolutionize coating?" —George L. Booth	59	Oct. 26
Calender coating is a limited and specialized application —George L. Booth	40	Jan. 19
Can infra-red take over the drying of paper coatings? —George L. Booth	56	May 18
Coating technology continues advance as growth curve flattens	46	May 25
Cores, shafts and chucks for coating and converting —George L. Booth	39	Feb. 2
Design and use of sheet carrying rolls in converting —George L. Booth	54	April 13
Drums offer the simplest method of drying paper coatings —George L. Booth	48	June 1
Electrostatic coaters have found limited specialized uses —George L. Booth	32	Jan. 5
Factors in selecting an air heating system for drying coatings —George L. Booth	38	June 8
General principles in the drying of paper coatings	48	April 27
High speed extrusion coating is a complex operation—I —George L. Booth	62	Jan. 26
High speed extrusion coating is a complex operation—II —George L. Booth	31	Feb. 2
High speed extrusion coating is a complex operation—III —George L. Booth	55	Feb. 9
Reiling coating can improve properties of coated paper —Thomas Reiling	42	Sept. 28
Sheet guiding systems for converting operations —George L. Booth	62	March 16
Slitting operations in converting and special winders used —George L. Booth	74	March 30
Special conveyor systems for coating dryers —George L. Booth	56	May 11
Splicing systems for continuous feed for coating and converting —George L. Booth	38	March 9
Wide range of drives required for coating equipment —George L. Booth	53	May 4
Computers		
Computer controls moisture and basis weight at Garden State	58	Oct. 19
Computerized maintenance for a research paper machine —B. T. Hofreiter and W. L. Williams	39	Aug. 10
Consolidated takes a hard look at process computer profitability —I. B. Sanborn	46	June 1
Coordinated control of basis weight and speed changes —R. L. Moore	44	Sept. 7
EUCEPA Conference on automation draws record attendance —John C. W. Evans	60	May 11
Integrated computer control system in Finland —Olavi Lehtikoski	36	Feb. 23
"Paper Trade Journal" survey reveals NA process computers: status and practice	87	Aug. 24
Rubber covered roll nip calculations made with a computer —Lyle Ryder	48	Dec. 14
What is a computer really? How does it work? What can it do for us? —Roger Grant	48	Sept. 14
Where NA mills are using process computers and with what benefits	25	Aug. 31
Converting		
Can Infra Red take over the drying of paper coatings? —George L. Booth	56	May 18
Don't overlook the chemical reactions in paper drying —D. Eklund	36	Nov. 23
Defects caused in drying paper—notably cockling and curl	36	April 20
Design, use and limitations of high velocity air hoods —K. H. Andersson	36	Aug. 17
Drums offer the simplest method of drying paper coatings —George L. Booth	48	June 1
Dryer hoods and ventilation—how they affect costs and paper quality —Hugh Marshall	48	Oct. 26
Dryer section condensate removal and steam pressure control —Torsten Simmons	32	Aug. 3
Drying performance of the combination Yankee-dryer hood —W. A. Spraker	46	Feb. 23
Drying techniques and economics		

	PAGE	ISSUE
highlight TAPPI Annual Meeting	33	March 2
Cross machine moisture uniformity—its importance and control	67	March 30
Factors in selecting an air heating system for drying coatings —George L. Booth	38	June 8
Factors which affect MD drying on the paper machine	54	March 16
Factors which affect steam consumption in paper drying —Gary Smook	56	April 27
General principles in the drying of paper coatings	48	April 27
Heat and mass transfer from cylinder to paper and with the paper during drying —W. A. Spraker	28	Jan. 5
Heat recovery in paper drying—practical and economic considerations —Gary A. Smook	50	June 1
How condensate flow affects heat transfer in paper machine dryers —Gunnar Gavelin	97	Aug. 24
Importance of paper shrinkage and its control during drying	60	April 13
New heat recovery system for paper machine hood exhaust —Gunnar Gavelin	38	Feb. 23
Results from a new moisture profile—correcting dryer fabric	44	May 25
Special conveyor systems for coating dryers —George L. Booth	56	May 11
Use of survey methods in the study of paper drying systems—Part I —Gary A. Smook	58	Nov. 9
Use of survey methods in the study of paper drying systems—Part II —Gary A. Smook	61	Nov. 16

Drying

Brakes and continuous systems for converting unwind stands —George L. Booth	40	April 20
Cores, shafts and chucks for coating and converting —George L. Booth	39	Feb. 2
Design and use of sheet carrying rolls in converting —George L. Booth	54	April 13
Effect of heat flow through dryer walls on drying capacity —Paper Trade Journal Staff Report	39	Dec. 21
Electrostatic coaters have found limited specialized uses —George L. Booth	32	Jan. 5
Experimental corrugator aims at solution killing problem	40	Aug. 31
High efficiency converting center at Gilbert speeds deliveries	50	July 20
Fibre Box Assn. hopes high with shipments still below 1969 level	51	Nov. 9
Heat recovery system improves economics of solvent incineration	56	Nov. 9
New corrugating plant in Burlington is PCA's 34th	46	Oct. 12
Paper and board converting strong in West Germany	43	Sept. 7
Sheet guiding systems for converting operations —George L. Booth	62	March 16
Speed and automation stressed at semi-annual containers conference	32	Nov. 30
Splicing systems for continuous feed for coating and converting —George L. Booth	38	March 9
What's new in imaging technology —Perrin A. Allen, Jr., and E. J. Gaisser	35	July 13

Economics and business

Capacity survey indicates modest increases for years 1971-73 —John C. W. Evans	37	Nov. 30
Fibre Box Assn. hopes high with shipments still below 1969 level	51	Nov. 9
Paper industry suffers earnings drop despite rising sales —Ralph W. Michaud	42	Oct. 12
Swedish pulp paper industry had a record first half	45	Oct. 12

Engineering

All electric control valves in new Georgia Pacific's mill at Crossett	54	Oct. 5
High-density polyethylene pipe used for handling effluent	60	Feb. 9
How a scale model was used as an engineering design check —R. H. Bernstein	25	Jan. 5
How to reach press section decisions on an economic basis —Peter Nilsson	45	July 13
Influence of molybdenum on paper mill corrosion resistance —Varno Sailas	51	Feb. 9
New Holmans Bruk AB reduced noise from a new paper machine —Per-Ake Berg and Karl-Axel Hellberg	42	Nov. 2
New stainless steels defeat pulp and paper mill corrosion —G. Lindh and B. Lofblad	35	Sept. 28
New variable speed drive offers a number of advantages	49	Nov. 2
Paper machine and related noise abatement developments —J. W. Crouse and C. B. Dahl	44	Nov. 30
Proper temperature monitoring can prevent motor burnouts —R. L. Nailen	60	Sept. 14
Rubber covered roll nip calculations made with a computer —Lyle Ryder	48	Dec. 14
TAPPI Engineering Conference features maintenance free systems	50	Dec. 7
What constitutes a good slitter knife? What are its metallurgical characteristics? —G. M. Maxwell and F. J. Worzala	62	Dec. 7

Finishing

Fourth Annual Finishing Group holds comprehensive meeting in Maine	32	Nov. 23
How Champion electronically inspects lightweight coated papers —James A. Benzing	37	Aug. 10

XUM

	PAGE	ISSUE
How Consolidated Papers cut pulp and costs —James G. Wellspeak	59	Sept. 14
How to control manpower utilization in finishing operations —J. W. Robinson	49	Sept. 7
Is trimming still necessary? How much is it costing? —J. W. Robinson	100	Aug. 24
Price gets a clean, accurate cut with a duplex board sheeter —Maurice R. Castagne	50	May 4
Productivity variation can be a major finishing problem —J. W. Robinson	32	Aug. 31
Supervisory staffing is poorly planned and executed in finishing —J. W. Robinson	63	Sept. 14
Which is the finishing room to be, a burden or an asset? —J. W. Robinson	32	Aug. 17
Forecasts		
Battelle forecasts the future for periodical publications	42	Nov. 23
North American wood pulp prospects	42	April 6
Outlook for international business in 1971 and the decade of the 70's —Dr. Irene W. Meister	37	Nov. 2
Outlook for wood supply and demand in the United States —Edward P. Cliff	48	April 6
Western Europe paper use at least 48 million tons by 1980	43	Nov. 23
What will happen to book publishing in the next twenty years?	40	Nov. 23
Instrumentation		
All electric control valves in new Georgia Pacific's mill at Crossett.	54	Oct. 5
Ambient air sampling instruments, program costs, and applications —J. S. Henderson	92	Aug. 24
A new approach to press section performance analysis —David P. Antos and Donald E. Baade	36	July 27
A study of headbox pressure and level control systems —Ralph Lindstrom	50	March 30
Application of infra-red moisture measurement to paper machines —Donald B. Scrivens	42	Jan. 19
Computer controls moisture and basis weight at Garden State	58	Oct. 19
Coordinated control of basis weight and speed changes —R. L. Moore	44	Sept. 7
Current instrumentation theory examined at PUPID Meeting	46	May 4
Don't scrap old instruments—look for a hidden bonanza! —Donald C. Task	37	June 8
Electronic controls give Olinkraft digester smooth start-ups and flexible operation	42	Nov. 30
First conference anywhere devoted to on-machine paper testing —John C. W. Evans	31	Aug. 10
How Champion electronically inspects lightweight coated papers —James A. Benzing	37	Aug. 10
How far can we go in automating a groundwood pulp mill —Gunnar Gavelin	42	Aug. 17
"Paper Trade Journal" survey reveals NA process computers: status and practice	87	Aug. 24
What are the justifications for instrumental paper inspection? —Erich Scharf	50	Jan. 12
Where NA mills are using process computers and with what benefits.	25	Aug. 31
International		
API report explores the important world containerboard market —Dr. Irene W. Meister	71	June 29
Bowaters plugs in Verti-Forma wet end at Mersey mill in U. K.	32	July 6
Developments in the industry in the Far East and their effect in N. A. —James L. Ritchie	44	July 27
ESPRA holds successful Seventh European Meeting —John C. W. Evans	66	June 29
EUCEPA Conference on automation draws record attendance —John C. W. Evans	60	May 11
Integrated computer control system in Finland —Olavi Lehtikoski	36	Feb. 23
Finnish developments in steam, power and chemical recovery —E. N. Westerberg	44	Jan. 12
Finnish mill installs new high speed, high capacity pulp moulder	27	Feb. 2
New Swedish unbleached kraft market pulp mill in operation	34	June 22
Norwegians organize excellent symposium on groundwood —Gunnar Gavelin	34	Aug. 31
Old Scottish espart mill adds new paper machine	32	Jan. 19
Outlook for international business in 1971 and the decade of the 70's —Dr. Irene W. Meister	37	Nov. 2
Paper and board converting strong in West Germany	43	Sept. 7
Production doubled at Swedish woodowners Morrum pulp mill —Gunnar Gavelin	43	July 27
Swedish mill practice touch-up refining of screened groundwood	43	May 25
Swedish pulp paper industry had a record first half	45	Oct. 12
"Three companies dominate the Australian pulp and paper industry" —Tony Thomas	61	Oct. 26
U. K. papermakers discuss paper and board production control	32	Dec. 21
Western Europe paper use at least 48 million tons by 1980	43	Nov. 23
Whither international business and the paper industry? —Dr. Irene W. Meister	42	June 15
Markets and Marketing		
A papermaker looks at the economy —William H. Palm	68	June 29
API report explores the important		

	PAGE	ISSUE
world containerboard market —Dr. Irene W. Meister	71	June 29
Current status and outlook for market pulp, demand and prices —Thomas J. Salb	35	June 22
Current status of paperboard industry is that of holding pattern —J. Rodney Edwards	36	June 15
Developments in the industry in the Far East and their effect in N. A. —James L. Ritchie	44	July 27
How much will U. S. paper-grade chemical grow by 1975?	36	June 22
How to assess new product and market potential in our industry —Stuart U. Rich	36	July 13
No doom and gloom at the API Paperboard Group Meeting —John C. W. Evans	33	June 15
Outlook for wood supply and demand in the U.S. —Edward P. Cliff	48	April 6
Present problems and future prospects for paperboard —C. R. Duffie	34	June 15
What's new in imaging technology —Perrin A. Allen, Jr. and E. J. Gaisser	35	July 13
Wither international business and the paper industry? —Dr. Irene W. Meister	42	June 15

Maintenance

Computerized maintenance for a research paper machine —B. T. Hofreiter and W. L. Williams	39	Aug. 10
Epoxy based compounds offer chances for maintenance miracles	34	Aug. 17
TAPPI Engineering Conference features maintenance free systems	50	Dec. 7
High-density polyethylene pipe used for handling effluent	60	Feb. 9
How to reduce bearing failures through vibration analysis —R. L. Nailen	58	Nov. 16
Influence of molybdenum on paper mill corrosion resistance —Varno Sailas	51	Feb. 9
New stainless steels defeat pulp and paper mill corrosion —G. Lindh and B. Lofblad	35	Sept. 28
Performance of reinforced plastics in sodium hypochlorite —Gerald G. Greth, D. M. Longenecker and James C. Miller	64	March 16
Problems and practices in refinishing super-calender rolls —John A. Kilmartin	66	May 18
Proper temperature monitoring can prevent motor burnouts —R. L. Nailen	60	Sept. 14

Mechanical pulping

Exploring refiner mechanical pulping operations and advantages —Joseph A. Kurdin	37	Sept. 7
How far can we go in automating a groundwood pulp mill —Gunnar Gavelin	42	Aug. 17
Norwegians organize excellent symposium on groundwood —Gunnar Gavelin	34	Aug. 31
Some new approaches to the screening of groundwood —W. F. Cowan	42	July 13
Swedish mill practice touch-up refining of screened groundwood	43	May 25

Miscellaneous

ABC's of making disposables-fibers, binders, formation	28	Feb. 2
American Can widens product line with expansion and modernization —Joe H. Olin	32	April 20
A papermaker looks at the economy —William H. Palm	68	June 29
Behavior of paper under strain —Otto J. Kallmes	54	July 20
Canadians view broad spectrum of technological advances	41	Feb. 23
Facing up to the social and economic environs of the 70's —J. W. McSwiney	38	June 15
First bond paper made using kenaf pulp in the furnish —T. F. Clark	48	Jan. 12
How Armstrong Cork Co. heats whitewater with transchargers —R. C. Duell and Robert C. Gorner	60	Dec. 14
How the American Paper Industry performed in 1969	40	April 6
Institute of Paper Chemistry holds executives conference	40	June 1
Interstate Paper helps private land reforestation	47	April 20
Management consultants—cure or cancer in the corporate body? —Herbert Reed Waterbow	58	Jan. 26
Materials handling becomes twice as efficient at Bowaters Kemsley mill	27	Dec. 28
Nation's economic outlook analyzed at "Paper Week"	36	April 6
New general strain for paper fiber analysis and identification —N. G. Hurlbut	65	Dec. 7
New Holmans Bruk AB reduced noise from a new paper machine —Per-Ake Berg and Karl-Axel Hellberg	42	Nov. 2
New mills and major expansion in the U. S. and Canada—1970	43	March 9
Outlook for expansion in the U. S. exports of secondary fibers —Perry H. Koplik	37	March 9
Paperboard housing offers low-cost shelter with 20-year life	71	Jan. 26
Policy for a recession-ready inflation-ridden economy —Walter W. Heller	43	April 6
Public concern and industry interest in forests —J. P. Campbell	44	April 6
Roundtable shows disposables a growth area for mills	30	Dec. 28
The Disposables Assn. meets in N. Y. to discuss its past, present and future —Jack M. Greenfield	42	July 20

XUM

	PAGE	ISSUE
The Hydrasieve—a new simplified solids-liquid separator —M. E. Ginaven	34	Jan. 19
U. K. papermakers discuss paper and board production control	32	Dec. 21
Unusual bulk handling speeds operation at S. D. Warren	29	June 15
Why suppliers' new product campaigns so often go wrong or how not to sell a new product to the paper industry —Eugene F. McCarthy	53	July 20

New mills and machines

Boise Southern completes start-up of a new mill at DeRidder, La. —Joe H. Olin	52	May 18
Bowaters plugs in Verti-Forma wet end at Mersey mill in U. K.	32	July 6
Certain-teed vs. obsolescence at Ohio roofing felt mill	44	April 27
Finnish mill installs new high speed, high capacity pulp moulder	27	Feb. 2
First U. S. Verti-Forma is world's first making fine papers —Joe H. Olin	56	Jan. 12
High quality carbonizing paper is aim for Port Huton's No. 8 —Paul D. Van Derveer	74	Feb. 16
High score in air/water quality set by American Can	46	March 16
National Gypsum builds a new cylinder machine mill —Maurice R. Castagne	30	Sept. 28
New cylinder formers prove successful at Beveridge plant	46	Dec. 14
Newest market pulp mill in the U. S. is Kentucky's first	34	March 9
New mills and major expansions in the U. S. and Canada—1970	43	March 9
New Swedish unbleached kraft market pulp mill in operation	34	June 22
Old Scottish espart mill adds new paper machine	32	Jan. 19
Packaging Corp. proves new cylinder former design —Charles Jakeway	26	March 2
Penntech streamlines old Saturday Evening Post mill —Richard Botshon	40	Nov. 2
Powell River newsprint mill completes another expansion program	41	Aug. 10
Production doubled at Swedish woodowners' Morrum pulp mill —Gunnar Gavelin	43	July 27
St. Anne-Nackawic mill begins pulp, corrugating production	52	Nov. 16

Papermaking

A new approach to press section performance analysis —David P. Antos and Donald E. Baade	36	July 27
A new functional language for the specifying of wet felts —Charles G. Tewksbury	68	Jan. 26
A study of headbox pressure and level control systems —Ralph Lindstrom	50	March 30
"A totally new concept in stock refining—the Vargo beater" —Harry Nilsson	54	Oct. 26
Application of infra-red moisture measurement to paper machines —Donald B. Scrivens	42	Jan. 19
Benefits obtained by chemical treatment of paper machine wires —D. Caulkins, F. T. Corradini, C. G. Gendron, C. G. Hollis and A. K. Wells	51	April 27
Coordinated control of basis weight and speed changes —R. L. Moore	44	Sept. 7
Cross machine moisture uniformity—its importance and control	67	March 30
Dandy roll makes a come-back on high speed machines —Jan Planhammer	36	Dec. 21
Defects caused in drying paper—notably cockling and curl	36	April 20
Design, use and limitations of high velocity air hoods —K. H. Andersson	36	Aug. 17
Don't overlook the chemical reactions in paper drying —D. Eklund	36	Nov. 23
Drainage and formation on the fourdrinier are still misunderstood —Foster P. Doane, Jr.	32	Dec. 28
Dryer hoods and ventilation—how they affect costs and paper quality —Hugh Marshall	48	Oct. 26
Dryer section condensate removal and steam pressure control —Torsten Simmons	32	Aug. 3
Dryer performance of the combination Yankee-dryer hood —W. A. Spraker	46	Feb. 23
Effect of heat flow through dryer walls on drying capacity —Paper Trade Journal Staff Report	39	Dec. 21
Factors which affect MD drying on the paper machine	54	March 16
Factors which affect steam consumption in paper drying —Gary A. Smook	56	April 27
Filling of tissue machine pick-up felts prime removal cause	40	May 25
First bond paper made using kenaf pulp in the furnish —T. F. Clark	48	Jan. 12
Foil systems and the future of single wire paper machines —V. E. Hansen	80	Feb. 16
Foils improve glassine quality and output at Nicolet	54	Nov. 9
"Hammermill installs first of a new generation of calenders"	47	Oct. 26
Heat and mass transfer from cylinder to paper and within the paper during drying —W. A. Spraker	28	Jan. 5
Heat recovery in paper drying—practical and economic considerations —Gary A. Smook	50	June 1
How condensate flow affects heat transfer in paper machine dryers —Gunnar Gavelin	97	Aug. 24
How forming variables can modify sheet strength		

	PAGE	ISSUE
—D. J. Fahey and C. W. Polley ..	40	July 13
How to reach press section decisions on an economic basis —Peter Nilsson	45	July 13
Importance of paper shrinkage and its control during drying	60	April 13
Is your paper machine keeping up with clothing styles?	44	Oct. 5
Modern chemicals bring new horizons to papermaking —Paul D. Van Derveer	45	Feb. 9
New design for system for air removal from stock —Gunnar Gavelin	38	Aug. 31
New heat recovery system for paper machine hood exhaust —Gunnar Gavelin	38	Feb. 23
Paper machine and related noise abatement developments —J. W. Crouse and C. B. Dahl ..	44	Nov. 30
Radically new press felt design for vertical flow presses —William S. Wightman	40	July 6
Results from a new moisture profile-correcting dryer fabric	44	May 25
Use of survey methods in the study of paper drying systems—Part I —Gary A. Smook	58	Nov. 9
Use of survey methods in the study of paper drying systems—Part II —Gary A. Smook	61	Nov. 16
Use of swimming roll type drums on a two-drum winder —W. Dorfel	25	Aug. 3
West Coast mill tops 3,000 f.p.m. hurdle on newsprint	38	May 25
What constitutes a good slitter knife? What are its metallurgical characteristics? —G. M. Maxwell and F. J. Worzala	62	Dec. 7
What is the current status of progress in forming fabric use	62	May 18
What is the outlook for drying paper with micro-waves? —B. Agdur and P. Hedvall	38	Sept. 28

Personnel

A business man looks at students "The Storm is Gathering"	41	June 15
How are you going to keep them down on the farm —Walter S. White	34	July 6
How to control manpower utilization in finishing operations —J. W. Robinson	49	Sept. 7
Maine Foundation marks twenty years of education and research ..	42	May 4
Penntech streamlines old Saturday Evening Post mill —Richard Botshon	40	Nov. 2
Supervisory staffing is poorly planned and executed in finishing —James W. Robinson	63	Sept. 14
The freedom to teach versus the freedom to learn	43	June 1
Training technical men for positions in the paper mill	48	Oct. 12
What can management do about professional personnel turnover	62	June 29

Pulping chemical recovery

A different approach to oxidation of black liquor —Herbert L. Freedman	50	June 8
Carbonation in sodium base sulphite pulping liquor recovery processes —T. T. Collins, Jr. and P. E. Shick	39	June 22
Combined kraft and sulphite recovery with the Tampella process —J. Ahava, H. Romantschuk, E. Saiha and V. Tutipaa	22	Aug. 3
Direct oxidation of sodium sulphide to sodium sulphite —T. T. Collins, Jr. and P. E. Shick	50	Oct. 5
Design and operation of ACE system for kraft odor reduction —J. V. Gommi	44	July 6
Fluidized bed burning of kraft mill lime mud —A. Erdman, Jr.	40	Sept. 7
Recovery processes using partial solution or crystallization —T. T. Collins and P. E. Shick ..	39	July 27
Spent liquor disposal via FluoSolids combustion at an NSSC mill —H. Miles	26	Aug. 17

Water and air effluent

A different approach to oxidation of black liquor —Herbert L. Freedman	50	June 8
Ambient air sampling instruments, program costs, and applications —J. S. Henderson	92	Aug. 24
Canadian Air and Stream Meeting stresses cooperative efforts —Joe H. Olin	34	Jan. 5
Canadian industry viewpoint on air and water pollution	39	July 6
Finnish developments in steam, power, and chemical recovery —E. N. Westerberg	44	Jan. 12
G. N. takes giant improvement step with new MgO —John C. W. Evans	50	April 13
Heat recovery system improves economics of solvent incineration ...	56	Nov. 9
High score in air/water quality set by American Can	46	March 16
How Armstrong Cork Co. heats whitewater with transchargers —R. C. Duell and Robert C. Gorner	60	Dec. 14
NCASI reports 1969 activites names officers —Joe H. Olin	46	April 6
New effluent plant at Schweitzer meets quality standards	39	Nov. 23
Oxygen secondary waste treatment cuts pollution costs —Joe H. Olin	31	June 15
Planning for air pollution control —J. S. Henderson	48	July 27
Pollution control—whose responsibility? —F. N. Kemmer	51	Oct. 12
Pollution project completed at G-P's Woodland, Maine complex	56	Oct. 19
Progress in pollution control explored at air/water conference		

XUM

	PAGE	ISSUE
—Paul D. Van Derveer	72	June 29
Review of starch problems as related to stream pollution —W. J. Gillespie, D. W. Marshall and C. A. Mazzola	29	March 2
Terminal waste treatment and sludge disposal methods —R. R. Evans	28	Aug. 3
The Institute looks at our industry's environmental problems	44	June 1
"Trickling filter with plastic media highly successful in pollution reduction"	57	Oct. 26
Waste paper		
Managing the solid waste function	66	Nov. 16
Outlook for expansion in the U.S. exports of secondary fibers —Perry H. Koplik	37	March 9
Wood		
Design and application of pneumatic chip conveying systems —John A. McClure	36	Feb. 2
Materials handling becomes twice as efficient at Bowaters Kemsley mill	27	Dec. 28
"Negative pressure systems handle sawdust for Glatfelter"	58	Oct. 26
Utilization of beetle-killed Southern pine trees —Edwin H. Barron	62	Oct. 19

Author Index to 1970 Feature Articles

A

Agdur, B. and Hedvall, P.—What is the outlook for drying paper with micro-waves?—38, Sept. 28.

Ahava, J., Romantschuk, H., Saiha, E. and Tutipaa, V.—Combined kraft and sulphite recovery with the Tampella process—22, Aug. 3.

Allen, Perrin A. Jr. and Gaisser, E. J.—What's new in imaging technology—35, July 13.

Andersson, K. H.—Design, use and limitations of high velocity air hoods—36, Aug. 17.

Antos, David P. and Baade, Donald E.—A new approach to press section performance analysis—36, July 27.

B

Baade, Donald E. and Antos, David P.—A new approach to press section performance analysis—36, July 27.

Barron, Edwin H.—Utilization of beetle-killed Southern pine trees—62, Oct. 19.

Benzing, James A.—How Champion electronically inspects light-weight coated papers—37, Aug. 10.

Berg, Per-Ake and Hellberg, Karl-Axel—New Holmans Bruk AB reduced noise from a new paper machine —42, Nov. 2.

Bernstein, R. H.—How a scale model was used as an engineering design check—25, Jan. 5.

Booth, George L.—Brakes and continuous systems for converting unwind stands—30, April 20; "Bubble coating-sleeping giant? Could this revolutionize coating?"—59, Oct. 26; Calender coating is a limited and specialized application—40, Jan. 19; Can infra-red take over the drying of paper coatings?—56, May 18; Cores, shafts and chucks for coating and converting—39, Feb. 2; Design and use of sheet carrying rolls in converting—54, April 13; Drums offer the simplest methods of drying paper coatings—48, June 1; Electrostatic coaters have found limited specialized uses—32, Jan. 5; Factors in selecting an air heating system for drying coatings—38, June 8; High speed extrusion coating is a complex operation-I—62, Jan. 26; High speed extrusion coating is a complex operation-II—31, Feb. 2; High speed extrusion coating is a complex operation-III—55, Feb. 9; Sheet guiding systems for converting operations—62, March 16; Slitting operations in converting and special winders used—74, March 30; Special conveyor systems for coating dryers—56, May 11; Splicing systems for continuous feed for coating and converting—38, March 9; Wide range of drives required for coating equipment—53, May 4.

Botshon, Richard—Penntech streamlines old Saturday Evening Post mill—40, Nov. 2.

C

Campbell, J. P.—Public concern and industry interest in forests—44, April 6.

Castagne, Maurice R.—Price gets a clean, accurate cut with a duplex board sheeter—50, May 4; National Gypsum builds a new cylinder machine mill—30, Sept. 28.

Caulkins, D., Corradini, F. T., Gendron, C. G., Hollis, C. G., and Wells, A. K.—Benefits obtained by chemical treatment of paper machine wires—51, April 27.

Clark, T. F.—First bond paper made using kenaf pulp in the furnish—48, Jan. 12.

Cliff, Edward P.—Outlook for wood supply and demand in the U.S.—48, April 6.

Collins, T. T. Jr. and Shick, P. E.—Carbonation in sodium base sulphite pulping liquor recovery processes—39, June 22; Direct oxidation of sodium sulphide to sodium sulphite—50, Oct. 5; Recovery processes using partial solution or crystallization—39, July 27.

Corradini, F. T., Caulkins, D., Gendron, C. G., Hollis, C. G. and Wells, A. K.—Benefits obtained by chemical treatment of paper machine wires—51, April 27.

Cowan, W. F.—Some new approaches to the screening of groundwood—42, July 13.

Crouse, J. W. and Dahl, C. B.—Paper machine and related noise abatement developments—44, Nov. 30.

D

Dahl, C. B. and Crouse, J. W.—Paper machine and related noise abatement developments—44, Nov. 30.

DeCrosta, Edward F.—Paper drying developments with plastic screen dryer fabrics—52, May 11.

Doane, Foster P. Jr.—Drainage and formation on the fourdrinier are still misunderstood—32, Dec. 28.

Dorfel, W.—Use of swimming roll type drums on a two-

drum winder—25, Aug. 3.
Duell, R. C. and Gorner, Robert C.—How Armstrong Cork Co. heats whitewater with transchargers—60, Dec. 14.
Duffie, C. R.—Present problems and future prospects for paperboard—34, June 15; Problems of the paperboard section of our industry—30, Dec. 21.

E

Edwards, J. Rodney—Current status of paperboard industry is that of holding pattern—36, June 15; How paperboard is doing and meaning of capacity survey—28, Dec. 21.
Eklund, D.—Don't overlook the chemical reactions in paper drying—36, Nov. 23.
Erdman, A. Jr.—Fluidized bed burning of kraft mill lime mud—40, Sept. 7.
Evans, John C. W.—Capacity survey indicates modest increases for years 1971-73—37, Nov. 30; ESPRA holds successful Seventh European Meeting— 66, June 29; EUCEPA Conference on automation draws record attendance—60, May 11; First conference anywhere devoted to on-machine paper testing—31, Aug. 10; G. N. takes giant improvement step with new MgO—50, April 13; No doom and gloom at the API Paperboard Group Meeting—33, June 15; Paperboard producers ponder production and profits —27, Dec. 21.
Evans, R. R.—Terminal waste treatment and sludge disposal methods—28, Aug. 3.

F

Fahey, D. J. and Polley, C. W.—How forming variables can modify sheet strength—40, July 13.
Freedman, Herbert L.—A different approach to oxidation of black liquor—50, June 8.

G

Gaisser, E. J. and Allen, Perrin A. Jr.—What's new in imaging technology—35, July 13.
Gavelin, Gunnar—How condensate flow affects heat transfer in paper machine dryers—97, Aug. 24; How far can we go in automating a groundwood pulp mill—42, Aug. 17; New design for system for air removal from stock—38, Aug. 31; New heat recovery system for paper machine hood exhaust—38, Feb. 23; Norwegians organize excellent symposium on groundwood—34, Aug. 31; Production doubled at Swedish woodowners Morrum pulp mill—43, July 27.
Gendron, C. G., Caulkins, D., Corradini, C. G., Hollis, C. G. and Wells, A. K.—Benefits obtained by chemical treatment of paper machine wires—51, April 27.
Gillespie, W. J., Marshall, D. W. and Mazzola, C. A.—Review of starch problems as related to stream pollution—29, March 2.
Ginaven, M. E.—The Hydrasieve—a new simplified solids-liquid separator—34, Jan. 19.
Gommi, J. V.—Design and operation of ACE System for kraft odor reduction—44, July 6.
Gorner, Robert C. and Duell, R. C.—How Armstrong Cork Co. heats whitewater with transchargers—60, Dec. 14.
Grant, Roger—What is a computer really? How does it work? What can it do for us?—48, Sept. 14.
Greenfield, Jack M.—The Disposables Assn. meets in N.Y. to discuss its past, present and future—42, July 20.
Greth, Gerald G., Longenecker, D. M. and Miller, James C.—Performance of reinforced plastics in sodium hypochlorite—64, March 16.

H

Hansen, V. E.—Foil systems and the future of single wire paper machines—80, Feb. 16.
Hedvall, P. and Agdur, B.—What is the outlook for drying paper with micro-waves?—38, Sept. 28.
Hellberg, Karl-Axel and Berg, Per-Ake—New Holmans Bruk AB reduced noise from a new paper machine —42, Nov. 2.
Heller, Walter W.—Policy for a recession-ready inflation-ridden economy—43, April 6.
Henderson, J. S.—Ambient air sampling instruments, program costs and applications—92, Aug. 24; Planning for air pollution control—48, July 27.
Hofreiter, B. T. and Williams, W. L.—Computerized maintenance for a research paper machine—39, Aug. 10.
Hollis, C. G., Caulkins, D., Corradini, A. K., Gendron, C. G. and Wells, A. K.—Benefits obtained by chemical treatment of paper machine wires—51, April 27.
Hurlbut, N. G.—New general stain for paper fiber analysis and identification—65, Dec. 7.

J

Jakeway, Charles—Packaging Corp. proves new cylinder former design—26, March 2.

K

Kallmes, Otto J.—Behavior of paper under strain—54, July 20.
Kemmer, F. N.—Pollution control—whose responsibility? —51, Oct. 12.
Kilmartin, John A.—Problems and practices in refinishing super-calender rolls—66, May 18.
Koplik, Perry H.—Outlook for expansion in the U.S. exports of secondary fibers—37, March 9.
Kurdin, Joseph A.—Exploring refiner mechanical pulping operations and advantages—37, Sept. 7.

L

Lehtikoski, Olavi—Integrated Computer Control System in Finland—36, Feb. 23.
Lindh, G. and Lofblad, B.—New stainless steels defeat pulp and paper mill corrosion—35, Sept. 28.
Lindstrom, Ralph—A study of headbox pressure and level control systems—50, March 30.
Lofblad, B. and Lindh, G.—New stainless steels defeat pulp and paper mill corrosion—35, Sept. 28.
Longenecker, D. M., Greth, Gerald G. and Miller, James C.—Performance of reinforced plastics in sodium hypochlorite—64, March 16.

M

Marshall, D. W., Gillespie, W. J. and Mazzola, C. A.—Review of starch problems as related to stream pollution—29, March 2.
Marshall, Hugh—Dryer hoods and ventilation—how they affect costs and paper quality—48, Oct. 26; What are the current trends in drying of paperboard?—41, Oct. 5.
Maxwell, G. M. and Worzala, F. J.—What constitutes a good slitter knife? What are its metallurgical characteristics?—62, Dec. 7.
Mazzola, C. A., Gillespie, W. J. and Marshall, D. W.—Review of starch problems as related to stream pollution—29, March 2.
Meister, Dr. Irene W.—API report explores the important world containerboard market—71, June 29; Outlook for international business in 1971 and the decade of the 70's—37, Nov. 2; Whither international business and the paper industry?—42, June 15.
Michaud, Ralph W.—Paper industry suffers earnings drop despite rising sales—42, Oct. 12.

XUM

Miles, H.—Spent liquor disposal via FluoSolids combustion at an NSSC mill—26, Aug. 17.
Miller, James C., Greth, Gerald G. and Longenecker, D. M.—Performance of reinforced plastics in sodium hypochlorite—64, March 16.
Moore, R. L.—Coordinated control of basis weight and speed changes—44, Sept. 7.

Mc

McCarthy, Eugene F.—Why suppliers' new product campaigns so often go wrong or how not to sell a new product to the paper industry—53, July 20.
McClure, John A.—Design and application of pneumatic chip conveying systems—36, Feb. 2.
McSwiney, J. W.—Facing up to the social and economic environs of the 70's—38, June 15.

N

Nailen, R. L.—How to reduce bearing failures through vibration analysis—58, Nov. 16; Proper temperature monitoring can prevent motor burnouts—60, Sept. 14.
Nilsson, Harry—A totally new concept in stock refining—the Vargo beater—54, Oct. 26.
Nilsson, Peter—How to reach press section decision on an economic basis—45, July 13.

O

Olin, Joe H.—American Can widens product line with expansion and modernization—32, April 20; Boise Southern completes start-up of a new mill at DeRidder, La.—52, May 18; Canadian air & stream meeting stresses cooperative efforts—34, Jan. 5; First U.S. Verti-Forma is world's first making fine papers —56, Jan. 12; NCASI reports 1969 activities names officers—46, April 6; Oxygen secondary waste treatment cuts pollution costs—31, June 15.

P

Palm, William H.—A papermaker looks at the economy —68, June 29.
Paper Trade Journal Staff Report—Effect of heat flow through dryer walls on drying capacity—39, Dec. 21.
Planhammer, Jan—Dandy roll makes a come-back on high speed machines—36, Dec. 21.
Polley, C. W. and Fahey, D. J.—How forming variables can modify sheet strength—40, July 13.

R

Reiling, Thomas—Reiling coating can improve properties of coated paper—42, Sept. 28.
Rich, Stuart U.—How to assess new product and market potential in our industry—36, July 13.
Ritchie, James L.—Developments in the industry in the Far East and their effect in N.A.—44, July 27.
Robinson, J. W.—How to control manpower utilization in finishing operations—49, Sept. 7; Is trimming still necessary? How much is it costing?—100, Aug. 24; Productivity variation can be a major finishing problem—32, Aug. 31; Supervisory staffing is poorly planned and executed in finishing—63, Sept. 14; Which is the finishing room to be a burden or an asset?—32, Aug. 17.
Romantschuk, H., Ahava, J., Saiha, E. and Tutipaa, V.—Combined kraft and sulphite recovery with the Tampella process—22, Aug. 3.
Rowlandson, Gordon—Continuous oxygen bleaching in commercial production—38, Dec. 21.
Ryder, Lyle—Rubber covered roll nip calculations made with a computer—48, Dec. 14.

S

Saiha, E., Ahava, J., Romantschuk, H., and Tutipaa, V.—Combined kraft and sulphite recovery with the Tampella process—22, Aug. 3.
Sailas, Varno—Influence of molybdenum on paper mill corrosion resistance—51, Feb. 9.
Salb, Thomas J.—Current status and outlook for market pulp, demand and prices—35, June 22.
Sanborn, I. B.—Consolidated takes a hard look at process computer profitability—46, June 1.
Scharf, Erich—What are the justifications for instrumental paper inspection—50, Jan. 12.
Scrivens, Donald B.—Application of infra-red moisture measurement to paper machines—42, Jan. 19.
Shick, P. E. and Collins, T. T.—Recovery processes using partial solution or crystallization—39, July 27; Carbonation in sodium base sulphite pulping liquor recovery processes—39, June 22; Direct oxidation of sodium sulphide to sodium sulphite—50, Oct. 5.
Simmons, Torsten—Dryer section condensate removal and steam pressure control—32, Aug. 3.
Smook, Gary A.—Factors which affect steam consumption in paper drying—56, April 27; Heat recovery in paper drying—practical and economic considerations—50, June 1; Use of survey methods in the study of paper drying systems-Part I—58, Nov. 9; Use of survey methods in the study of paper drying systems-II—61, Nov. 16.
Spraker, W. A.—Drying performance of the combination Yankee-dryer hood—46, Feb. 23; Heat and mass transfer from cylinder to paper and within the paper during drying—28, Jan. 5.

T

Task, Donald C.—Don't scrap old instruments—look for a hidden bonanza!—37, June 8.
Tewksbury, Charles G.—A new functional language for the specifying of wet felts—68, Jan. 26.
Thomas, Tony—"Three Companies dominate the Australian pulp and paper industry"—61, Oct. 26.
Tutipaa, V., Ahava, J., Romantschuk, H. and Saiha, E.—Combined kraft and sulphite recovery with the Tampella process—22, Aug. 3.

V

Van Derveer, Paul D.—High quality carbonizing paper is aim for Port Huron's No. 8—74, Feb. 16; Modern chemicals bring new horizons to papermaking—45, Feb. 9; Progress in pollution control explored at air/water conference—72, June 29.

W

Waterbow, Herbert Reed—Management consultants—cure or cancer in the corporate body?—58, Jan. 26.
Wells, A. K., Caulkins, D., Corradini, F. T., Gendron, C. G. and Hollis, C. G.—Benefits obtained by chemical treatment of paper machine wires—51, April 27.
Wellspeak, James G.—How Consolidated Papers cut pulp and costs—59, Sept. 14.
Westerberg, E. N.—Finnish developments in steam, power and chemical recovery—44, Jan. 12.
Wightman, William S.—Radically new press felt design for vertical flow presses—40, July 6.
Williams, W. L. and Hofreiter, B. T.—Computerized maintenance for a research paper machine—39, Aug. 10.
White, Walter S.—How are you going to keep them down on the farm—34, July 6.
Worzala, F. J. and Maxwell, G. M.—What constitutes a good slitter knife? What are its metallurgical characteristics—62, Dec. 7.

XUM